

Low Specific Activity (LSA) Transportation Accident Exercise Scenario



Prepared for the Department of Energy Office of Transportation and Emergency Management

table of contents



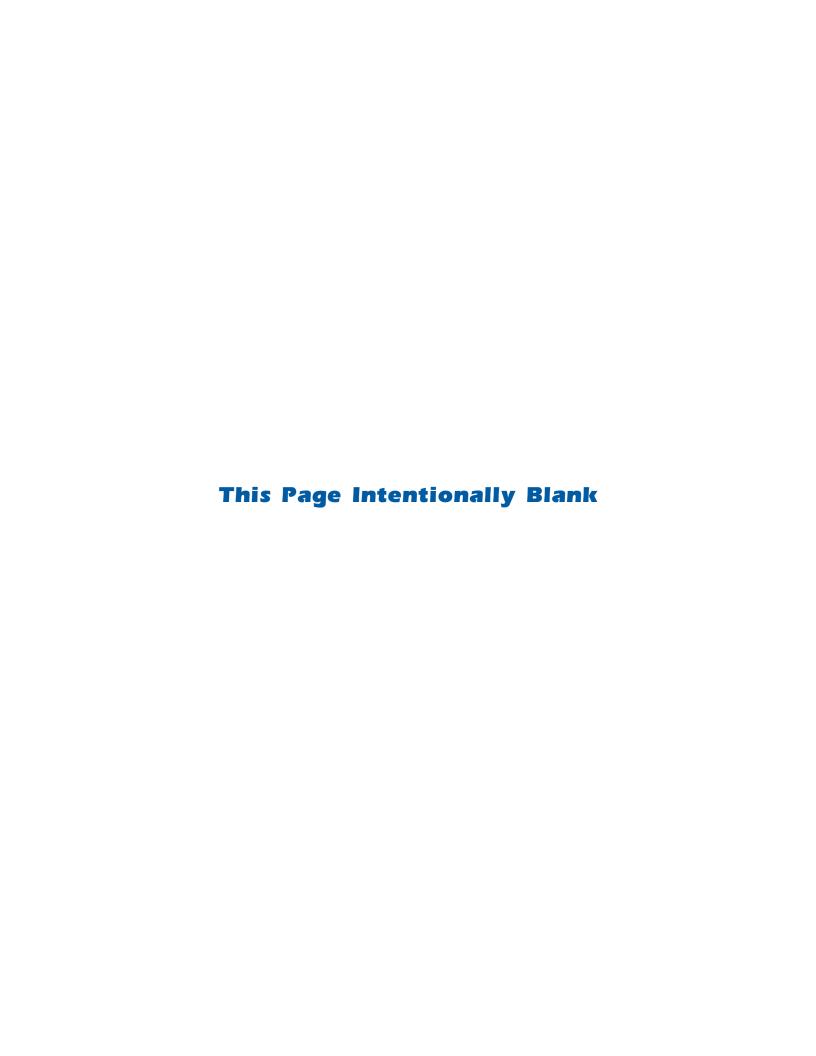
Transportation Emergency Preparedness Program (TEPP)

Drill-in-a-Box

Low Specific Activity (LSA)
Transportation Accident



Exercise Summary	3
Section 1.0 Introduction	3
Section 2.0 Scope	
Section 3.0 Objectives	
Section 4.0 Example Schedule	8
Section 5.0 Participation	
Section 6.0 Conduct	
Section 7.0 Narrative Summary/Timeline	
Section 8.0 Messages	17
Section 9.0 Radiological Data	
Section 10.0 Meteorological Data	
Section 11.0 Public Information Data	
Section 12.0 Props	
Section 13.0 Simulations	
Section 14.0 Security	
Section 15.0 Medical Data	
Appendix A Exercise Checklist for Planning and	
Appendix B Exercise Evaluation Form	41
Appendix C Exercise Chronology Log	
Appendix D Radiological Data	





EXERCISE SUMMARY

- Single vehicle accident on a public highway
- A truck hauling LSA material (Class 7-Radioactive) has spilled several drums and the contents
 of these drums has been released from both outer and inner packaging
- This exercise does not include fire or fuel spillage
- This exercise, as written, includes an (optional) injury scenario
- The exercise simulates the initial occurrence of the accident through the arrival and integration of the DOE RAP Team into the Incident Command System
- Appendix A includes guidance for developing an Exercise Safety Plan
- Appendix B includes evaluation forms to document player performance
- Appendix C includes a Chronology Log Sheet
- Appendix D includes the Radiological Data for the exercise

1.0 INTRODUCTION

This scenario provides the planning instructions, guidance, and evaluation forms necessary to conduct an exercise involving a highway shipment of Low Specific Activity (LSA) material. This exercise manual is one in a series of five scenarios developed by the Department of Energy Transportation Emergency Preparedness Program. Responding agencies may include several or more of the following: local municipal and county fire, police, sheriff, and Emergency Medical Services (EMS) personnel; state, local, and federal emergency response teams; emergency response contractors; and other emergency response resources that could potentially be provided by the carrier and the originating facility (shipper).

This scenario provides the guidance for conducting the exercise in a safe, efficient, coordinated manner, and provides a historical record of the exercise.



2.0 SCOPE

This exercise scenario should be used to demonstrate the local community's emergency response deployment to a highway accident involving LSA materials. It may also be used to demonstrate the initial phase of the emergency response notification and communication system to:

- Demonstrate the emergency response notification and communication system
- Observe actual response times of emergency responders to a simulated accident scene
- Verify equipment operability (including radiological monitoring equipment) and the accuracy of field emergency response procedures
- Ensure all appropriate notifications are made in accordance with local, state, and federal regulations
- Identify and assess incident scene hazards
- Determine and implement protective measures required for the safety of both response personnel and the general public
- Determine additional response resources required to contain and restore the site and make appropriate notifications to obtain those resources
- Demonstrate response activities, including:
 - Responder deployment
 - Responding agency interaction
 - Incident Command System (ICS) establishment and operations
 - Identification and assessment of hazards
 - Incident control

3.0 OBJECTIVES

The objectives listed below are based on a simulated transportation (highway) accident and should be performed in accordance with the appropriate state, county, and local community procedures, and according to the standards and limits outlined in each objective's extent of play. The numbering system employed for the objectives is based on the objective numbers from the Federal Emergency Management Agency (FEMA) Hazardous Materials Exercise Evaluation Methodology (HM-EEM); the objectives may not be in sequential order. Appendix B of this document contains necessary evaluation forms to evaluate responder performance for this exercise scenario. A complete listing of the 16 FEMA HM-EEM objectives can be found in the "Hazardous Materials Exercise Evaluation Forms" document located on the TEPP webpage http://www.em.doe.gov/otem/program.html.



Objective 1 - Initial Notification of Response Agencies and Response Personnel

Demonstrate the ability to notify response agencies and to mobilize emergency personnel.

Extent of Play:

This objective should be demonstrated by each participating response agency as it would in an actual emergency. All appropriate primary or backup communications systems (radio, cell phone, land line, etc.) should be used during the exercise as in an actual emergency. The exercise will be initiated by contacting the local emergency notification network and reporting the simulated accident/location. All appropriate federal/state/county/local response agencies and units agreeing to participate should be appropriately notified and should respond. All response units should be timed from receipt of emergency notification to arrival on scene.

Personnel/units should be deployed, real-time, to the accident scene based on accident conditions relayed via the notifications system. Responding units shall not transit in an "emergency mode" (i.e., no lights and sirens) and should not take/perform any action that impacts the general public, such as establishing road blocks or detours at or near the simulated incident scene.

Objective 2 - Direction and Control

Demonstrate the ability to direct, coordinate, and control emergency response activities through operation of an Incident Command System (ICS) and other direction and control structures.

Extent of Play:

This objective should be demonstrated by the arrival and assumption of the Incident Commander (IC) position by the first responding unit/personnel as it would be in an actual emergency. The position and responsibility of Incident Command should be transferred to the senior response officer, upon arrival, and a status turnover should be conducted. A visible command post, communication system, and organizational structure should be established. (Assumption: Response personnel have been trained to conduct response using ICS).

Objective 3 - Incident Assessment

Demonstrate the ability to identify the hazardous materials involved in an incident/accident and to assess the hazards associated with the material involved during both the emergency and post-emergency phases.

Extent of Play:

This objective should be demonstrated by the active assessment of the incident hazards, including a preliminary observational survey of possible injuries, physical hazards at the accident site,



materials released, extent of release, release receptors, and the hazards associated with the materials. The initial assessment information should be obtained from placards, shipping documents, package markings, labeling, and the Emergency Response Guidebook. Based on the preliminary observational assessment, a determination of further resources to physically assess the incident site should then be made. If resources are available, further physical assessment should occur. If local resources are not available for further assessment, requests for assistance should be made as appropriate (State Response Team or other higher level technical responders).

Objective 4 - Resource Management

Demonstrate the ability to mobilize and manage resources required for the emergency.

Extent of Play:

This objective should be demonstrated by determining the resources required for response as a result of the incident assessment. Once the resources required are determined, proper notification and mobilization should occur. Additional resources should be integrated into the response effort by the Incident Commander.

Objective 5 - Communications

Demonstrate the ability to establish and maintain communications essential to support response to an incident/accident.

Extent of Play:

This objective should be demonstrated by establishing and maintaining communication between all resources activated for the response. All appropriate primary or backup communications systems (radio, cell phone, land line, etc.) should be used during the exercise as in an actual emergency. A communications system between response personnel should be established on site by the Incident Commander, as should offsite communications to local, state, federal, shipper, transportation and contract resources.

Objective 10 - Response Personnel Safety

Demonstrate the ability to protect emergency responder health and safety.

Extent of Play:

This objective should be demonstrated by a site safety officer establishing one or more zones to regulate the movement of personnel throughout the accident scene/site. Responders should also demonstrate usage of appropriate personal protective equipment (PPE), responder accountability system, and usage of appropriate monitoring equipment for site hazards.



Objective 11 - Traffic and Access Control

Demonstrate the organizational ability and resources to implement site security, to control evacuation traffic flow and access to evacuated and sheltered areas.

Extent of Play:

This objective should be demonstrated by the effective implementation of site security measures, utilization of appropriate resources, and effective traffic control. Although security units should be sent to the proper locations for traffic control, no actual roadblocks or detours that would affect the general public should be established.

Objective 14 - Emergency Medical Services

Demonstrate the adequacy of personnel, procedures, equipment, and vehicles for transporting contaminated and/or injured individuals, and the adequacy of medical personnel and facilities to support the operation.

Extent of Play:

This objective should be demonstrated by the effective determination of EMS resources required for the accident site, communication of potential contamination hazards that may require prenotification to EMS and other medical support personnel, and steps taken by EMS personnel to plan and prepare for potential contamination hazards.

Objective 15 - Containment and Cleanup

Demonstrate the ability to implement appropriate measures for containment, recovery, and cleanup of a release hazardous material.

Extent of Play:

This objective should be demonstrated by notifying and obtaining resources for assistance. Personnel (response and additional resources) should assess the impact of the release, demonstrate appropriate planning strategies for control and containment, and then control and contain the released material, if adequate resources are available.

Objective 16 - Incident Documentation and Investigation

Demonstrate the ability to document a hazardous materials incident/accident and response.

Extent of Play:

This objective should be demonstrated by implementing appropriate log-keeping, follow-up documentation, and debriefing procedures.



4.0 EXAMPLE SCHEDULE

The table below provides an example schedule for planning and conducting the exercise. This schedule may be modified for site-specific exercise conditions. A more detailed checklist is included in Appendix A.

Date	Planning	Schedule
	120 Days	Conduct a planning meeting to discuss objectives, safety, and extent of play and identify player organizations. Also select exercise dates and location.
	90 Days	Validate objectives and modify exercise scenario to meet community response needs. Schedule needed responder training. Involve media to promote exercise activity.
	60 Days	Finalize exercise scenario, player organizations, and review modified exercise scenario. Identify and secure necessary exercise props.
	30 Days	Select controller and evaluator organizations. Conduct necessary controller and evaluator training.
	25 Days	Establish weekly planning meeting schedule. Planning meetings will be used to finalize remaining details. Establish an exercise punch list to ensure all planning and safety items have been assigned and are scheduled to be done.
	10 Days	Conduct player, evaluator and controller briefings.
	1 Day	Review Safety Plan, ensure exercise props are available, and make notifications to all agencies of exercise time and location.



5.0 PARTICIPATION

The following is a list of suggested personnel/groups that may participate in the exercise, depending on the desired complexity of the exercise. (Many of these agencies may be simulated.)

Exercise Coordinators

Lead Planner Safety Officer Media Coordinator

Local Response Organizations

Local Fire Department
Local Municipal Police Department
Local Emergency Operations Center (EOC)
County Sheriff's Office
Emergency Medical Service/Ambulance/Hospital
Local HazMat Response Team (if available)
Other Mutual Aid Organizations

State/Federal Agencies

State Hazardous Materials Response Team
State Radiation Authority
State Emergency Operations Center (EOC)
Nearby DOE Facility
US Environmental Protection Agency
Nuclear Regulatory Commission
National Response Team
National Response Center (US Coast Guard)
DOE Regional RAP Team

Commercial Organizations

Commercial Licensed Radioactive Materials Transporter Commercial Contractor Trained for Radioactive Material Cleanup



6.0 CONDUCT

The following section provides guidelines for exercise conduct.

Concept of Operations

Three groups of personnel should participate in the exercise: Players, Controllers, and Observers.

Players

Players are individuals who have assigned roles during an emergency. Players should respond to the scenario as they would during an actual emergency, initiating actions to control and mitigate the simulated emergency to ensure the health and safety of response personnel and the public. Players are expected to obtain necessary information through established emergency information channels and to use their own judgment in determining response actions when resolving problems.

Controllers

Controllers are responsible for the safe and effective conduct of the exercise. They perform an active role in the exercise by providing data to players. Controllers are the only non-players who provide information or direction to players. Controllers may prompt or initiate certain player actions to ensure exercise continuity. Controllers are identified by wearing standard identification devices such as caps, or arm bands. Appendix A includes an exercise controller position listing table to assist in determining who is needed as a controller for the exercise.

Observers

Observers are persons who do not have an active exercise role but who watch exercise conduct. Observers do not communicate directly with players. They should, however, report any safety concerns to a controller. Observers are identified by wearing standard identification devices different from those worn by controllers.

Controlling Messages

Exercise Messages

Exercise messages are used to control the flow and progress of the exercise. These messages are designed to simulate the physical indications that would normally be available to responders in an actual emergency. Exercise messages are issued by controllers to players at appropriate times. The issuance of exercise messages is coordinated via the scenario timeline; controllers are briefed prior to the exercise in a controller briefing. Concurrence from the Lead Controller during the exercise is not normally required.



Contingency Messages

Contingency messages are used to ensure the continuity of the exercise in the event that players do not initiate actions that are critical to the exercise timeline. In most instances, issuance of contingency messages requires the notification of the Lead Controller PRIOR to issuance.

Implementation

Exercise Ground Rules

At no time shall players, controllers, or observers physically walk across the highway or railroad tracks without the escort of Safety Controllers or Public Safety Officers. Players shall not have prior knowledge of the scenario. The exercise scenario should not include any actions or situations that degrade the actual condition of systems and equipment, affect the detection and assessment of actual emergencies, or diminish the capability for response to actual emergencies. No actions or reactions shall be initiated that involve actual operation of equipment (other than radiological monitoring) or affect operating capability.

Emergency response facilities should not be pre-activated and response personnel should not be pre-staged. All players should follow their normal work routines until exercise events cause them to initiate emergency response actions. Except for the actions identified in the list of actions to be simulated, or as otherwise directed by exercise controllers, players are to respond to exercise events and information as if the emergency were real. Players shall act as if simulated hazardous conditions were real.

All exercise participants shall take no action that reduces the safety of themselves or the public. All exercise participants shall adhere to public laws, including traffic regulations, and shall follow any orders given by law enforcement personnel. Controllers should only provide players with the information that they are specifically designated to disseminate in their assigned functional area. Players are expected to obtain other necessary information through existing emergency information channels. In the event that players do not initiate actions "critical" to the successful completion of the exercise scenario, controllers should issue Contingency Messages, which direct players to initiate specific actions and/or provide on-the-spot training to assist completion of critical actions. All exercise messages and communications shall be preceded and followed by the phrase, "THIS IS AN EXERCISE."

Exercise Controller Guidelines

The responsibility of exercise controllers is to ensure that exercise events occur in the sequence prescribed by the scenario and to monitor exercise play. Exercise controllers must be familiar with suspension of play procedures that pertain to their assigned area.



Before Exercise Day

- 1. Familiarize yourself with the exercise objectives and extent of play applicable to your area of control.
- 2. Ensure that you understand the scenario and timeline.
- 3. Obtain and review suspension of play procedures applicable to your area of control.
- 4. Familiarize yourself with the controller organization and communication methods.
- 5. Review exercise messages and scenario information that you are responsible to provide to players. Ensure that you understand how the players are to receive this information and what their responses should be.
- 6. Ensure you know how to contact the Lead Controller for questions or problem resolution.
- 7. Perform a field walk-down of your observation location(s) to ensure you know where and when you must report prior to exercise commencement.

Immediately Prior to the Exercise

- 1. Report to your assigned area as scheduled.
- 2. Familiarize yourself with your assigned work station and equipment.
- 3. Ensure that you are readily identifiable by all players.
- 4. Identify and test a phone or radio that you may use for communications with other controllers.
- 5. Identify yourself to any players who may be in your area of control. Ensure they are familiar with your role.

During the Exercise

- 1. Ensure that safety remains the number one priority for all actions and activities carried out during the exercise.
- 2. Identify all players that you will be controlling during the exercise, and inform them of your function.
- 3. If applicable during the exercise, brief all players in your area on exercise ground rules and/or initial conditions. Explain that you may help/instruct the player(s) in proper response actions based on their actions during the exercise.
- 4. Remain at your assigned location until the exercise has been terminated by the Lead Controller.
- 5. Ensure that each player in your area of control/observation has been logged on an attendance sheet and that the attendance sheet identifies the appropriate facility.
- 6. If a real emergency occurs that affects the players in your area of control/observation, terminate your portion of the exercise and notify the Lead Controller.
- 7. Refer any/all actual general public and/or media inquiries to the "Media Coordinator," TBD, as applicable, based on your location.
- 8. Position yourself to maximize your effectiveness in issuing messages and/or observing the players.
- 9. Record arrival times and actions of key players.
- 10. Distribute exercise messages, as required, and provide additional input, as necessary, to keep the scenario progressing as designed. Make sure that the players understand the messages you give them.



- 11. If you are uncertain what actions are being taken by the players or why, make sure you ask, so that you understand the extent of play. Phrase questions so as not to prompt the players of expected actions. Allow the players reasonable flexibility to perform their functions and demonstrate their skill, knowledge, and initiative.
- 12. Do not allow external influences to distract the players.
- 13. Do not allow simulation when notification/communication equipment is available (unless the action would decrease the level of personnel safety).
- 14. Note all your observations, as appropriate, on the provided Exercise Chronology Log in Appendix C.
- 15. Do not allow player actions to continue if they would obviously impair scenario continuity. Notify the Lead Controller if the timeline is off schedule, if the players depart significantly from the scenario, or if you are in doubt as to what to do.

Termination

Upon Exercise Termination

- 1. Complete Exercise Chronology Logs.
- 2. Document exercise findings on the appropriate Exercise Evaluations Forms found in Appendix B and the Exercise Chronology Log found in Appendix C,
- 3. Participate in the post-exercise debriefing.

Exercise Controller Debrief/Exercise Report

Immediately upon termination of the exercise, exercise controllers should meet to review player actions and identify exercise issues. An exercise report documenting exercise observations should be prepared upon completion of the exercise and should be submitted to the appropriate organizations.

7.0 NARRATIVE SUMMARY/TIMELINE

The following section provides a narrative summary of the exercise scenario and an approximate timeline (Table 2.0, located on page 17) for exercise activities. The timeline also provides anticipated points during the exercise where dissemination of the exercise messages contained in Section 8.0 are appropriate. The scenario and timeline are suggested guidelines for the exercise and may be modified to meet site-specific conditions.

Initial conditions (which are assumed to have occurred prior to exercise commencement):

A shipment of LSA materials in the form of 55-gallon drums (Class 7 - Radioactive) is being transported by truck. The shipment originated from the Idaho National Engineering and Environmental Laboratory outside of Idaho Falls, Idaho and is being transported to a permitted LSA treatment/disposal site. The vehicle is traveling through the local area.



The truck has been involved in a single vehicle accident, resulting in the truck leaving the pavement and rolling onto its side on the road shoulder. Several straps have broken, resulting in the release of several drums. Two of the drums have broken open, releasing bags with magenta markings (radioactive material bags) in an area of approximately 100 square feet. One of the bags has broken open scattering debris (clothing, wipes, rags, scrap tools) throughout the area. The truck driver gets out of the vehicle and sits on the ground a short distance from the accident site.

Delete the next sentence if you want to omit the medical injury:

The truck driver has sustained a fractured arm and a minor contusion on the forehead.

Meteorological conditions summary:

- Wind direction is "as read"
- Temperature is "as read"
- Wind speed is "as read"
- Assume rain is in the immediate forecast

NOTE: The assumption of rain may be omitted at the discretion of the Lead Controller, depending on weather conditions on the day of the exercise. See Section 10.0, Meteorology, for details.

Exercise play begins at this point:

A motorist (role player) in a vehicle in the vicinity of the (simulated) accident reports it, via cellular phone, to the local emergency response network (e.g., 911) dispatch center. The caller also reports that a truck has overturned, that several drums are on the ground with some bags near them, and that someone is sitting by the road near the truck.

Emergency response units should be dispatched to the incident scene, based on the information available, and transmitted via the notification/communications system. Initial emergency response units notified for deployment should include, at a minimum (either real or simulated), local police/sheriff's department, fire department, and EMS. Any unit arriving with radiological monitoring equipment should demonstrate radiological monitoring/survey operations.

The units should not transit in an "emergency mode" (i.e., no lights or sirens) and should not take/perform any action that impacts the general public, such as establish unnecessary roadblocks or detours at or near the simulated accident scene. All arriving units should be timed (to determine "maximum" response time) and accounted for. Any unit arriving with radiological monitoring equipment should demonstrate radiological monitoring/survey operations.



The first emergency response unit to arrive should be from the police/sheriff's department and should assume the position of Incident Commander (IC). They should establish initial control of the scene, cordon off the accident area, and set up traffic control or rerouting.

Within 5 minutes of the arrival of the first responding unit, the fire department and EMS should arrive. The Fire Chief should be briefed on the accident scene conditions by the initial responder. The Fire Chief should then assume the position of IC from the initial responder. A Command Post should be established along with lines of onsite and offsite communication. The IC should direct and provide personnel roles and responsibility designations. A site Safety Officer should be assigned to determine requirements for monitoring and PPE.

Emergency responders should assess the scene and plan/prepare for potential contamination hazards.

Delete this paragraph if you want to omit the medical injury:

Emergency responders should assess the extent of injuries sustained by the truck driver, provide initial treatment and then transport him/her to the hospital. Emergency responders should use proper contamination control procedures.

Responders should question the driver as to the location of the shipping papers and cause of the accident. The driver will have the shipping papers with him. The shipping papers contain the emergency response telephone number provided by the shipper.

An initial hazards assessment should be made of the scene. However, due to the unknown nature of the hazard and potential contamination from the release, personnel should not be allowed within direct proximity of the truck and spilled material. Appropriate monitoring equipment and PPE must be utilized for the physical site assessment. The IC should brief responders on the observed hazards at the scene prior to any response actions occurring.

A strategy for site safety and response actions should be developed in accordance with the guidelines set forth in the Emergency Response Guidebook (ERG). Proper site control and evacuation procedures should be implemented as outlined in ERG Guide 162. The Emergency Response Guidebook states, persons within 80-160 feet of the incident scene should be evacuated. Due to the threat of precipitation and the exposed contents of the breached radioactive material bags, responders should cover the released material with plastic to prevent possible contamination spread.

A resources assessment should be conducted by the IC/Safety Officer. The resource assessment should reveal monitoring equipment and appropriate PPE needed for additional site assessment. If monitoring equipment is available, the responders should don appropriate PPE and proceed with area surveys for possible contamination. If monitoring equipment is not available, the IC



should contact the local or state Radiation Authority for assistance. No further action should be taken at the site until monitoring occurs.

The IC should conduct emergency notifications or request these notifications be made by the dispatcher (e.g., emergency response phone number on the shipping papers). The shipper (role player simulating DOE) should provide technical data and response information specific to the material involved. This information is provided to the dispatcher and passed on to the IC. The shipper will also tell the dispatcher/IC that the DOE Radiological Assistance Program (RAP) Team should be deployed to the site within 1 hour.

The IC will discuss response resources and actions with the local or state Radiation Authority to determine the need for Hazardous Materials Response Team deployment. For the purpose of this exercise, the communication between the Radiation Authority and the IC will result in a decision to deploy the Hazardous Materials Response Team to the accident scene.

Upon completion of emergency response actions, the IC should direct responders to implement contamination control practices. Responders should establish a decontamination corridor and perform a survey or conduct a dry decontamination. The IC should direct responders who've entered the hot zone be separated and isolated until surveyed and determined to be clean.

Upon Hazardous Materials Response Team arrival, the team leader should report to the IC. The IC should provide a status briefing and make appropriate requests for radiological monitoring. The Hazardous Materials Response Team will verify that established contamination control practices were effective and decontamination has been completed. The Hazardous Materials Response Team will assist the IC in the development of a recovery plan. The recovery plan will identify needed response actions including survey needs, clean up plans, the documentation process, and the need for responder follow-up (whole body counting, dosimetry records, etc.). The accident scene will be surveyed by the Hazardous Materials Response Team or Radiation Authority (as applicable) to verify the accident area is free of contamination.

Upon their arrival, the RAP Team will be briefed by the IC and the Hazardous Materials Response Team leader explaining the status of the shipment, actions taken, and plans for recovery and clean up should be discussed. An exercise debriefing should be conducted upon termination of the exercise to provide evaluation results and lessons learned to all participating players.

The onsite portion of the exercise should be terminated upon determination by the Hazardous Materials Response Team or Radiation Authority (as applicable) that there is no contamination present at the scene and the IC has briefed the Hazardous Materials Response Team and RAP Team Captain explaining the status of the shipment, actions taken, and plans to complete the delivery of the packages. An exercise debriefing should be conducted upon termination of the exercise to provide evaluation results and lessons learned to all participating players.



Table 2.0: Timeline

Actual Time	Suggested Time	Event or Expected Action	Message #
	-01:00	All controllers are in place. Communications and time check completed between Lead Controller and staff.	
	-00:15	Incident scene is set up (controllers, players, props, signs, etc.).	
	00:00	Truck turns over on side of public highway.	
	00:00	Motorist calls emergency response network (911) and reports accident.	1
	00:05	Dispatch of emergency units is prompted.	3
	00:15	Emergency response units arrive and begin evaluating the incident scene. Responders discuss accident with truck driver.	2, 4
	00:18	Responders begin treating injured truck driver.	Medical Message 1
	00:20	Incident command post established.	
	00:25	Site security and control established.	
	00:28	Site assessment for additional hazards and injuries is completed. Resource evaluation is complete and needed response resources should be discussed. The overall response strategy and objectives should be discussed and communicated to emergency responders.	5
	00:35	Emergency responders transport injured driver to hospital.	
	00:40	First responders have completed rescue operations and scene assessment. Responders should exit the established control zones and conduct dry decontamination on those responders who entered the hot zone. Responders should be segregated from all other responders until they have been surveyed by the radiation authority.	
	00:45	Properly equipped and trained first responders may conduct radiation surveys. Also, response crews may discuss the need to cover the spilled radioactive material to prevent contamination spread during rain.	
	00:50	The local or state dispatcher should be directed by the IC to contact the shipper. The IC or designee should discuss any specifics about the shipment with the shipper.	6
	01:20	Hazardous Materials Response Team (HMRT) arrives. The HMRT Captain meets with IC to discuss current status and assist with mitigation planning. Recovery efforts begin.	7
	1:25	HMRT conducts radiation surveys of all responders who entered the accident scene, and conducts accident scene surveys to detect any released contamination.	
	01:30	DOE RAP Team arrives. RAP Team Captain meets with HMRT Team Captain and the IC to discuss RAP Team assistance.	
	TBD	Hold Messages 1 and 2 to be used only for breaks in play and to resume play.	8 A/B
	01:30	Exercise termination announcement to all agencies.	9
	01:30	Exercise controllers and players return incident scene to pre-exercise conditions.	
	02:00	Exercise controllers/players debriefed and incident documentation reviewed.	

8.0 MESSAGES

This section provides messages to be used during the exercise to ensure continuity of play. The messages provide critical scenario data.



MESSAGE 1

Initial Notification Call

TO: 911 Dispatcher FROM: Motorist (Player)

TIME: (00:00)

NOTE: Call in this message via cell phone or CB upon Lead Controller authorization to commence the exercise. This message provides a "bystander" eye witness notification of the truck accident.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.		
Message:		
"This is I am on highway, near mile marker, and there has been a truck wreck. The truck has overturned on its side. I see several drums on the ground near the truck, and some garbage bags scattered nearby."		
"There doesn't appear to be any smoke or fire coming from the truck. Someone is sitting near the truck."		
"You had better get help out here fast."		
THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.		



MESSAGE 2

Incident Scene Message

TO: Truck driver (Player)
FROM: Incident Scene Controller

TIME: 00:00

NOTE: This message is used by the controllers to commence the exercise. Do not transmit this message without Lead Controller authorization. The truck driver should be able to describe to players how the accident occurred based on the incident scene location.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

As the exercise is started, the driver is sitting near the truck. As responders arrive inform them:

"I am the driver of the truck. I was hauling a shipment of Low Specific Activity Radioactive Material drums. Ilost control of the truck and wrecked. I fell asleep and ran off the shoulder of the road where the road bends. I woke up and tried to pull it back onto the road but the wheels went over the edge of the embankment and I flipped. I was able to climb out of the passenger window. The truck turned over, spilling several drums on the roadside. Several of the drums have popped open releasing their contents. I did not come into contact with the spilled materials. I was able to get the shipping papers and get out of the truck."

Delete the next two sentences if the medical injury will be omitted:

"When the truck tipped over, I bumped my head and hurt my arm. I think my arm may be broken."

INCIDENT SCENE CONTROLLER NOTE: Show the driver (role player) the incident scene photo in Section 9.0 to help him/her understand what happened, and then explain to him/her how the props correspond to the scene set up.



MESSAGE 3 (CONTINGENCY MESSAGE)

Initial Dispatch of Units

TO: Emergency Response Network Dispatcher

FROM: Dispatch Controller(s)

TIME: (00.05)

NOTE: Issue this message with concurrence of the Lead Controller if no actions have been or are being taken to dispatch emergency units (i.e., police, fire department, or EMS) to the incident scene.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

"For the purpose of this exercise, you are directed to dispatch the following emergency response units to the incident scene" (list only the applicable units that have not already been dispatched, as shown below):

- Fire Department
- Police Department
- Emergency Medical Service



MESSAGE 4 (CONTINGENCY MESSAGE)

Responder Arrival to Scene, Initial Condition Assessment

TO: Responders at the Scene FROM: Incident Scene Controllers

TIME: (00:15)

NOTE: This message serves to provide players with a description of simulated incident conditions. The police/sheriff should be first to arrive. Within 5 minutes, the remaining first responding units should arrive and be briefed. Information within this message will only be relayed to responders positioned within line of site of the specified conditions and IF adequate props are not available. Use the photo in Section 9.0 if it does not give away unearned information to players and if it helps describe the props available or the absence of props, as applicable.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

For the purpose of the exercise the following information is to be provided to responders within line of site:

- The truck is lying on its side.
- Two of the drums on the ground have been compromised, and the contents have spilled. A number of bags are on the ground near the drums.
- No smoke or fire is coming from the truck.
- You see someone at the scene sitting on the ground away from the truck.

Delete this sentence if the medical injury will be omitted:

The person sitting near the truck is holding his/her arm.



MESSAGE 5 (CONTINGENCY MESSAGE)

Hazard Assessment

TO: Incident Commander

FROM: Lead Controller

TIME: (00.28)

NOTE: This message is to be given if play stalls during the hazard assessment phase. This message may be used to prompt the players to proceed with the exercise. Issue only those portions of the message that are appropriate (i.e., have not been considered or begun).

If the injury in the scenario is not omitted, issue this message before the driver (who has the shipping papers) is taken to the hospital.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

Issue only the applicable portions of the message below:

- For the purpose of this exercise, you are directed to request that the driver of the truck provide you with the shipping document information.
- You are directed to observe package markings, labels, and placards and use the information for hazard assessment purposes.
- You are also directed to determine if available resources are adequate for thorough site assessment and site control. If responders have not discussed or considered additional resources, prompt them to discuss the need for:
 - Shipper
 - State Radiation Authority
 - Hazardous Materials Team



MESSAGE 6 (CONTINGENCY MESSAGE)

Shipper Information

TO: Emergency Network Dispatcher or Incident Commander (as applicable)

FROM: Dispatcher Controller or Lead Controller (as applicable)

TIME: (00.50)

NOTE: This message serves to ensure that technical information from the shipper is received by the Incident Commander. Issue the applicable portion(s) of this message as described in italics below.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

PART 1: Issue this portion to the IC or dispatcher, as applicable, if the IC does not call the shipper directly from the Command Post or ask the dispatcher to contact the shipper within a reasonable amount of time, or if the dispatcher has been asked to contact the shipper but has not done so in a reasonable amount of time.

"For the purpose of this exercise, you are directed to contact the shipper using the emergency response number (as listed on shipping documents or as provided to the IC)."

PART 2: Issue this portion of the message if action is taken by the IC or dispatcher to contact the shipper, but the shipper is not playing or being simulated by a role player.

"The material is radioactive material, LSA, n.o.s., UN 2912, response guide 162. Cordon off the area, isolate the area 80-160 feet in all directions, have response personnel remain upwind, and do not try to clean up the site. Remain outside of the area of release. A Radiological Assistance Program Team is being deployed and should arrive within 1 hour."



MESSAGE 6 (CONTINGENCY MESSAGE) - continued

PART 3: Issue this portion of the message if the dispatcher contacts the shipper (actual or role player) but the dispatcher does not relay technical information back to the IC in a reasonable time.

"For the purpose of this exercise, you are directed to contact the IC and relay the technical information provided to you by the shipper."

CONTROLLER NOTE: The following note only applies to the controller who is role playing the shipper. The information should only be released if the IC, dispatcher, or another player requests this information from the shipper through the emergency telephone number contact. "The material being shipped is radioactive waste (e.g., protective clothing, tools, etc.). The drums do not contain Uranium or Thorium metal cuttings. The drums do not contain nitrates or oxidizers."



MESSAGE 7 (CONTINGENCY MESSAGE)

Response Team Briefing with the Incident Commander

TO: Incident Commander

FROM: Lead Controller

TIME: (01:20)

NOTE: The purpose of this message is to ensure the Hazardous Materials Response Team is integrated into the Incident Command System after their arrival. If an actual or simulated (by role players) Hazardous Materials Response Team is participating, this message will be used to prompt the IC to give a situation briefing to the Hazardous Materials Response Team if the IC does not initiate this action within approximately 10 minutes of Hazardous Materials Response Team arrival. If the Hazardous Materials Response Team is being simulated and no role players are available, the Lead Controller will simulate the team and request a turnover briefing using the second portion of this message.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

Issue this portion of the message ONLY if the Hazardous Materials Response Team (actual or role players) has been at the Command Post for approximately 10 minutes and the Incident Commander has not shown any initiative to provide the team with a briefing and integrate them into the response activities:

"For the purpose of the exercise being conducted today, you are directed to give the members of the Hazardous Materials Response Team a briefing and then integrate them into the response activities."

Issue this portion of the message ONLY if the Hazardous Materials Response Team is being simulated by the Lead Controller:

"For the purpose of the exercise being conducted today, I am role playing the Hazardous Materials Response Team. Please provide me with a briefing at this time."



MESSAGE 8A

Hold Message 1

TO: All Players

FROM: Lead Controller

TIME: Upon Suspension of Exercise Play

NOTE: DO NOT issue this message without authorization from the Lead Controller.

Continuation of the exercise play will occur upon coordination and concurrence between the Lead Controller and the Field Controllers. Exercise play will resume at the direction of the Lead Controller approximately 5 minutes after message 8b is issued.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

"Attention all personnel." Attention all personnel."

"The exercise has been suspended. All personnel are to remain in their current location. Emergency Responders are not to discuss exercise activities during this suspension. Stand by for further instruction regarding exercise activities."

Make this announcement every 5 minutes.



MESSAGE 8B

Hold Message 2

TO: All Players

FROM: Lead Controller

TIME: Upon Suspension of Exercise Play

NOTE: DO NOT issue this message without authorization from the Lead Controller.

Continuation of the exercise play will occur upon coordination and concurrence between the Lead Controller and the Field Controllers. Exercise play will resume at the direction of the Lead Controller approximately 5 minutes after this message is issued. Controllers should use the 5 minutes prior to exercise continuation to remind players of what was occurring when play was suspended.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

"Attention all personnel. Attention all personnel."

"Exercise activities will resume in 5 minutes. The exercise controllers will provide information to players prior to continuing the exercise."



MESSAGE 9

Termination Message

TO:	All Key Players/Notification Locations
FROM:	Lead Controller
TIME:	(01:30)

NOTE: Ensure all participating agencies are notified of exercise termination via the notification system.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

"The LSA Mate	rials Exercise is nov	v terminated. Pl	lease make al	ll necessary	termination
notifications. An	exercise debriefing w	rill be conducted a	at		(location)
at	(time)." (Repeat 1	Message)			



9.0 RADIOLOGICAL DATA

Included in this section are:

- Scene Description
- Radiation/Contamination Data

Scene Description

A shipment of LSA materials in the form of 55-gallon drums (Class 7 - Radioactive) is being transported by truck. The shipment originated from the Idaho National Engineering and Environmental Laboratory and is being transported to a permitted LSA treatment/disposal site. The vehicle is traveling through the local area. The LSA truck is involved in a single vehicle accident, resulting in the truck leaving the pavement and rolling onto its side on the road shoulder. Several straps have broken, resulting in the release of several drums.

Radiation/Contamination Data

See Appendix D for a Radiological Data Worksheet. The controller should take notice of which type of detector/probe is attached to the responder's instrument or the type of survey instrument used (radiation/contamination) as applicable. The controller should ask the responder (based upon which instrument or probe is used) how they would report their readings (i.e., in cpm or mR/hr). If a contamination survey instrument is used, readings should be requested and given in counts per minute. If a radiation survey instrument is used, the readings should be requested and given in mR/hr. Responders should realize that direct readings for contamination cannot be taken on the bags because of the radiation penetrating through the bags. Contamination surveys should be taken by wiping or smearing the bags and then checking each wipe for contamination in a low background area (i.e., away from the bags).

One of the bags of simulated LSA material will be torn open with material (clothing, wipes, rags, scrap tools) scattered throughout the area, as shown in the photo (Figure 1) on the following page. If/when radiological monitoring surveys are performed (by the first responding unit(s) or the Hazardous Materials Response Team) the following radiation/contamination levels will be found:

In close proximity (along a 30-foot path between the bag and the truck) to the damaged LSA bag, using a pancake probe or contamination survey instrument to directly survey the road surface, personnel will detect between 200 and 400 cpm of contamination. On contact with any spilled material, readings will range from 1,500 to 25,000 cpm. If responders try to take direct readings on the roadway surface with the contamination survey instrument in close proximity to the LSA bags, readings should be reported as significantly higher due to increased background radiation from the bags. Readings taken on contact with the damaged LSA bag will be 150,000 cpm to off-scale if contamination survey instrument is used. If the responder takes open/closed window readings with an appropriately equipped survey instrument, readings will be from 50 to 100 mR/



hr open window and 5 to 10 mR/hr closed window. Radiation readings on other non-damaged bags will have dose rates within the same range. If non-damaged bags are smeared for contamination and smears are checked in low background area, no contamination will be found.

Controllers should only give radiological data to players if and when they use their survey equipment properly. For instance, if players do not turn their equipment on, or are not on the proper scale, controllers should indicate to them that their instruments are reading zero/off scale as appropriate. Controllers should take note of whether players use their equipment properly (i.e., are instruments turned on and on the proper scale), but should not prompt them to do so.

Figure 1: Suggested Site Layout



10.0 METEOROLOGICAL DATA

All weather conditions for this exercise are "as read," with the exception of rain in the forecast. If rain is actually occurring when exercise play begins, play meteorology "live." If actual meteorology calls for snow (or another form of precipitation different from rain), the Lead Controller may, at his/her discretion, modify the initial conditions calling for rain. Exercise play will be suspended for certain adverse weather conditions as described in the Safety Plan as outlined in Appendix A.



11.0 PUBLIC INFORMATION DATA

There are no public information (exercise play) activities for this exercise. Refer any/all "actual" general public and/or media inquiries to the "Media Coordinator." The exercise point of contact is determined during the first exercise planning meeting.

12.0 PROPS

NOTE: You may decide to use signs, flags, and/or traffic cones as "props" in lieu of an actual truck, based on your budget and logistical considerations.

- Truck May use a truck that is upright
- Four Class 7 Radioactive Material Placards
- Several 55-gallon drums and released radioactive material bags and contents
- An example LSA label is provided with the radiological data in Appendix D
- Shipping papers and the Emergency Response Guidebook Guide 162, are provided with the radiological data in Appendix D
- Delete this sentence if the medical injury is omitted:
 - Moulage for head contusion and broken arm

13.0 SIMULATIONS

Most exercise activities will actually be performed as if the incidents were really occurring. The following list identifies the actions to be simulated. Additionally, controllers may direct participants to simulate certain activities to avoid performing actions that may cause adverse effects.

- Accident scene(s), damaged equipment, injured personnel, and other simulations may be accomplished through the use of a sign(s) indicating the truck wreck location, etc. Props, mock-ups, and victim role players should be used in this exercise.
- No public notification or any other actions affecting the general public should be implemented.
- Safety roadblocks or detours may be physically established prior to the exercise to enhance safety.
- Additional roadblock locations should be established by appropriate agencies for traffic control and player safety.
- Some roles and notification phone numbers may be simulated depending upon agencies that are participating. Simulated roles may include the Hazardous Materials Response Team, federal agencies, the shipper, and agencies other than local emergency responders. These simulations shall be accomplished through the use of role players and assigned phone numbers to role players.
- The truck, drums, and released materials will be simulated using appropriate props.
- Transport of the injured truck driver to the hospital may be simulated if the local hospitals are not participating in the exercise.



14.0 SECURITY

If necessary (depending on the location of your incident scene), some local law enforcement personnel (non-players) may be pre-staged at the scene for scene safety reasons (i.e., reroute traffic away from the simulated scene). However, the impact of the exercise on the general public should be kept at a minimum. Law Enforcement units and personnel who are actually dispatched as part of exercise play should report to locations as directed for scene control. However, these units should NOT actually establish barricades or cordons that would affect the general public. Public Safety/Security Controllers will determine the effectiveness of law enforcement activities by noting the arrival times, locations, and simulated activities of these units.

15.0 MEDICAL DATA

NOTE: Remove this entire section from the scenario package if the medical injury will be omitted.

The driver role player should be alert and fully able to describe to any player who asks how the simulated accident occurred, using a plausible explanation based on the incident scene chosen. One possible explanation is: "I fell asleep and ran off the shoulder of the road where the road bends. I woke up and tried to pull it back onto the road, but the wheels went over the edge of the embankment, and I flipped. I was able to climb out of the passenger window." The truck driver's injuries consist of a fractured (closed) arm and a mild head contusion (bump). He/she does not come into contact with any of the LSA drums or radiological material bags that are scattered on the ground near the truck, and he/she was able to bring the shipping documents out of the vehicle. When EMS arrives, the radiation hazard will have been discovered and EMS personnel should take the necessary precautions to prevent the possible spread of contamination.

The following medical message will be used by the EMS Controller to relay information to the EMS/medical players. Medical play will terminate when the victim is loaded onto the ambulance. Actual transport of the victim (role player) to the hospital will be simulated.



MEDICAL MESSAGE 1 FRACTURED ARM AND MILD HEAD INJURY

TO: First Responders/EMS

FROM: EMS Controller

TIME: Upon Arrival of Medical Personnel

NOTE: This data applies to a patient with a fractured arm and a mild head injury. Do not provide this data to players unless the means to obtain it are demonstrated.

THIS IS AN EXERCISE. DO NOT initiate actions affecting safe operations.

Message:

Patient complains of point tenderness with edema (swelling) present at pain location on his left arm. Movement of the extremity is present. Distal pulses and sensation are present. Patient also suffered a mild blow to the head. Small hematoma noted at impact site, with no deformity or loss of consciousness.

Expected Action:

Follow local protocols or standing orders.



APPENDIX A EXERCISE CHECKLIST FOR PLANNING AND SAFETY

Exercise	Date
Transport	additional information on the "Guidance for Planning, Conducting and Evaluating tation Emergency Preparedness Exercises" refer to the Department of Energy web site www.em.doe.gov/otem/program.html .
Phase 1	- Planning
	Determine the scope, objectives and extent of play for the exercise (exercise may be modified to meet local needs and objectives)
	Determine exercise participants
	Establish schedule and plan for the exercise
	Notify proposed participating agencies and confirm support
5	Determine locations for exercise activities (command center, accident scene, dispatcher's office, etc.)
6	Develop a safety plan (use Exercise Checklist for Planning and Safety/Appendix A)
7	Determine if pre-notification to the media is necessary (if a sample media plan is needed, refer to the DOE web site shown above to obtain information on Guidance for Planning, Conducting and Evaluating Transportation Emergency Preparedness Exercises. If further emergency information is needed, please contact a Public Information Officer to handle notifications/inquiries.
8	Establish controller assignments and simulated roles
9	Review the Exercise Evaluation Form for each objective found in Appendix B with participating agencies to ensure the objective will be completed as part of exercise play.
10	Modify the shipping document included in Appendix D to include exercise specific information (such as the emergency response phone number). Ensure the shipping documents and packages have necessary information, labels or markings.
11	Reproduce sufficient copies of completed/reviewed scenario packages, as well as copies of the applicable Exercise Evaluation Forms.
12	Determine and acquire props needed for site simulation
13.	Conduct player and observer briefings



Phase 2 - Exercise Setup

Ensure all controllers know the schedule and their designated position
 Ensure all props have been evaluated and validated prior to set up
 Install the props at each exercise location
 Ensure safety precautions are in place
 Verify all controllers are in position and key players/agencies are available to start

Phase 3 - Exercise Play

Ensure safety is, and remains, the most important concern of the exercise
 Ensure controllers are in place
 Ensure messages are distributed according to schedule
 Utilize hold messages if a break in play is needed
 Ensure ALL players and controllers at all exercise locations receive the exercise termination message

Phase 4 - Post Exercise Activities

Dismantle exercise scene props and return site to original state
 Direct all players and controllers to the debriefing location(s)
 Conduct exercise debriefing based on controller and player evaluations
 Document and track exercise strengths and recommended improvement areas

SAFETY PLAN AND CHECKLIST

The example Safety Plan and Checklist presented here is for a transportation emergency exercise. The example is generic, and may not be complete for your jurisdiction. Take time to identify and include necessary event-specific information.

SAFETY PLAN SCOPE

This plan has been included as a scenario package checklist so that controllers will be able to anticipate and recognize unplanned events that could result in personal injury or unforeseen property damage. It enables event participants to be governed by the safety guidelines established for the event.

PRE-EXERCISE SAFETY REQUIREMENTS

Controllers must be staged before the event is scheduled to begin to ensure there are no preexisting safety concerns that could affect the start of the event. Controller assignments and locations are identified at the end if this Appendix (page 40). The exercise Lead Controller must obtain a status of any identified safety concerns from all lead controllers prior to event commencement.



EXERCISE ACTIVITY BOUNDARIES AND OFF-LIMIT AREAS

Exercise boundaries, which define the areas at the incident scene that will be in and out of play, will be discussed in briefings, if applicable. Boundaries may also be defined by the "extent of play" for each objective, as shown in Section 3.0, Objectives. Safety concerns that arise during the exercise will be dealt with immediately by the exercise controllers in the affected area. As objectives are accomplished, certain areas may be allowed to return to normal activities.

Exercise participants are required to follow all existing safety guidelines for the use of protective

SAFETY EQUIPMENT

equipment. From the checklist below, mark an X next to the items that are applicable to this
exercise, and ensure that these items are provided for participants, as needed.
Controller communications (e.g., radios, cell phones, etc.)
Exercise identification (i.e., armbands, vests, caps, etc.)
Illumination devices
First aid kit
Water coolers (field teams may be directed to carry their own water)
Water carriers (rovers may be directed to deliver water to personnel)
Personnel comfort items (specify)
Fire extinguishers
Safety harnesses/lifelines, etc. (specify)
Eye/hearing protection devices (specify)
Gloves (specify who and when they should be worn)
Hard hats (specify who and when they should be worn)
Other protective clothing (specify)
Miscellaneous hand tools (specify)

SITE SPECIFIC HAZARDS

Exercise participants are required to follow all hazard postings in event areas. Participants must obey all traffic laws during the event. Response participants will NOT use emergency lights and sirens when responding to simulated accident scenes. No vehicles should go off road where wildlife, such as snakes and insects, may be encountered. In the event of electrical storms, high winds or other severe weather, participants will follow controller instructions. Field activities should be suspended or terminated under these conditions.

Controllers and responders must be mindful of symptoms of heat stress and hypothermia. Controllers will ensure that emergency response personnel are allowed the opportunity to rest whenever necessary. Controllers must halt exercise play anytime a responder appears to be in distress, and take all appropriate actions to ensure the well-being of individuals.



From the checklist below, mark an X next to the actual hazards that may be applicable to this
exercise. Special safety provisions should be made for all items checked.
Traffic (field teams need to be aware of road condition hazards and traffic, especially
when performing radiological monitoring)
Terrain (field teams may be required to use unpaved roads. Each vehicle will be
equipped with a fire extinguisher, shovel, bucket, and communications capabilities)
Overhead obstructions and hazards (i.e., power lines)
Electrical storms
Heat stress
Cold stress (hypothermia)
High winds
Visibility conditions
Electrical equipment hazards
Mechanical equipment/machinery
Hazardous material/storage areas
Fuel loading concerns
Thermal hazards
Tripping hazards
Confined spaces
Elevated locations
Hazardous materials
Pest control (i.e., ants, wasps, snakes, ticks, mosquitoes, etc.)
Personnel safety provisions (individual responsibilities/limits)
Outside agency safety provisions (responsibilities/limits)
Vehicle safety provisions (i.e., traffic laws shall be obeyed, seat belts used, etc.)
Exercise control provisions (i.e., safety briefings, how to handle actual emergencies,
etc.)
Vehicle props are safe, fuel tanks drained, combustible materials removed if a fire is
planned, broken glass has been removed or made safe

GENERAL SAFETY PROVISIONS

This section details specialized personnel assignments and functions related to safety concerns. Section 6.0, Conduct, of this scenario describes the controller organization, Page 40 provides an example listing of controllers and assignments. No changes will be made to controller assignments without prior assurance that any replacements have equal or greater understanding of safety concerns that could be encountered at the location to which they are assigned.

All safety concerns must be brought to the attention of the exercise Lead Controller and the exercise Safety Leader through the Controller Communications Network. Incidents and materials that may have adverse effects on people have been addressed in this section of the scenario manual.



Every effort has been made to anticipate and minimize hazardous situations inherent in this exercise. From the checklist below, mark an X next to the safety provisions that are applicable to
this exercise, and ensure that these provisions are communicated to participants and/or enforcedIndividual participants are personally responsible for their own safety
Each participant must monitor his/her own physical condition for signs of over exertion or distress
Any participant who observes another person injured or otherwise in need of assistance will immediately cease exercise activities and render aid/call for assistanceAll injuries, no matter how slight, must be immediately reported to the nearest controller
All ascents or descents from elevated heights will be by ladder, stairway, or other safe method. Jumping from elevated positions is not allowed
Controllers must be familiar with the hazards of the equipment involved and the required safety measures
Actual emergencies will be dealt with by a shadow force. If an emergency occurs that requires exercise responders to assist, the Lead Controller will suspend or terminate part or all of exercise play as deemed necessary
SECURITY/PUBLIC SAFETY PROVISIONS
From the checklist below, mark an X next to the security and public safety provisions that are applicable to this exercise. Special safety provisions should be made for all items checked. A backup or shadow force (fire, EMS, and police) is in place to ensure community coverage is not impacted by event response
Event calls should/may go to non-emergency lines to ensure that actual "911" law enforcement calls are handled expeditiously
Law Enforcement personnel must keep firearms holstered at all times during the exercise
Exercise play will be suspended in the event of an actual emergency
Emergency vehicles will respond without lights and sirens Cordoning off of large public areas will be simulated unless cordoning is required for safety reasons Recouring traffic will be simulated unless cordoning is required for safety reasons.
Rerouting traffic will be simulated unless cordoning is required for safety reasons
VEHICLE SAFETY PROVISIONS
From the checklist below, mark an X next to the vehicle safety provisions that are applicable to
this exercise. Ensure that these provisions are communicated to participants and/or enforced.
No vehicle will be driven in such a manner that posted speed limits are exceeded or safe driving rules are violated
Only those vehicles involved in the exercise will be used for movement



 Vehicles may not be mounted or dismounted until they come to a complete stop Spotters will be used when backing vehicles out of areas where other people or vehicles are present Roadblocks will be simulated by placing a blocking vehicle on the shoulder of the road and notifying an observer that a roadblock has been established All controller vehicles should be identified/placarded to eliminate player confusion or concerns Seat belts must be worn in moving vehicles
EXERCISE SIGNATURE PAGE A copy of the completed Exercise Scenario and any final report should be filed by the host agency to document the planning and conduct of this exercise.
Name of Exercise Planner
Signature of Exercise Planner
Exercise Date
Who Completed Checklist
Listing of participating agencies provided copies of the exercise scenario and report:



Exercise Controller Position Listing:

Controller Position Listing				
Organization	Name	Location or Contact Information	Position	
			Exercise Director	
			Exercise Safety Officer	
			Media Coordinator	
			Fire Department	
			Fire Department	
			Law Enforcement (Local)	
			Law Enforcement (County)	
			Emergency Operations Center Director	
			Medical Service (County)	
			Medical Service (Contract)	
			HazMat Team (Local)	
			HazMat Team (Regional)	
			Local Radiation Authority	
			State Radiation Authority	
			State Emergency Operations Center	
			National Response Team	
			HazMat Team On-Scene Coordinator	
			Nuclear Regulatory Commission	
			U.S. DOE RAP Team	
			Commercial Licensed Transporter	
			Commercial Cleanup Contractor	
			Other (Mutual Aid)	



APPENDIX B EXERCISE EVALUATION FORM

Da	nte:				
Exercise Location:					
Ev	valuator/Controller Name:				
	OBJECTIVE 1: INITIAL NOTIFICATION OF RESPONSE AGENCIES AND RESPONSE PERSONNEL Demonstrate the ability to notify response agencies and to mobilize emergency personnel.				
PC	DINTS OF REVIEW				
1.	Which organization provided initial notification of the incident accident?				
2.	When did this occur?				
3.	Which organizations/individuals received this notification? When? Organization/Individuals Time				
4.	Which notified organization(s) was responsible for notifying other necessary response elements?				
5.	Which organization provided notification of the incident/accident to external response support organizations?				
6.	If external response support notifications were made, indicate which organization/individual was contacted and the time of the notifications. Organization/Individuals Time				
7.	Did the response organization mobilize initial response personnel?				
	YES NO N/A N/O Time				



OBJECTIVE 1: INITIAL NOTIFICATION OF RESPONSE AGENCIES AND RESPONSE PERSONNEL (continued)

8.	If so, were the types and numbers of personnel mobilized related to the classification level of the emergency?							
	YES	NO	N/A	N/O	Time			
9.	If not, how we	ere the types	and numbers	of personnel o	determined?			
10.	Through wha	t means we	re the personne	el mobilized?				
11.	At what time did the mobilization process start and end for the responding organizations and personnel? Organization							
12.			En		their duty stations?			
19	A trub of time of		of the leave not	tions filled?				
13.	At what time	were most	of the key posi	uons mea?				



Date:					
Exercise Location:					
Evaluator/Controller Name:					
OBJECTIVE 2: DIRECTION AND CONTROL Demonstrate the ability to direct, coordinate, and control emergency response activities through operations of an incident command system (ICS) and other direction and control structures.					
POINTS OF REVIEW					
 Which position within the response organization did you evaluate? Incident Commander Emergency Management Director (EMD) at EOC Other designated personnel with leadership role in response organization (List positions) 					
 2. Check those actions which the Incident Commander accomplished in accordance with his/her agency response plan: Established a visible command post Established communications with offsite organizations Provided information about the incident/accident to offsite response authorities Assumed responsibility for the management of operations at the incident/accident site by a site-specific IC Established an organizational structure for the management of on-scene response operations, including delegations of authority Coordinated with personnel at the EOC or other offsite response authorities Managed the ICS interface with the operations of Federal On-Scene Coordinator Provided direction and control to all organizations responsible for response actions at the incident/accident site 					
3. Check those actions which the Incident Commander/EMD/or other designated personnel with a leadership role in the response organization accomplished: Issued instructions to staff on response operations Provided directions on adherence to the plan Coordinated with and disseminated information to offsite response organizations or any command of the offsite response effort Resolved conflicts Provided leadership in decision making Consulted with staff Provided needed authorities for emergency action Directed or coordinated with other response organizations					



Da	nte:						
Ex	Exercise Location:Evaluator/Controller Name:						
Ev							
De ac th	OBJECTIVE 3: INCIDENT ASSESSMENT Demonstrate the ability to identify the hazardous material(s) involved in an incident/ accident and to assess the hazards associated with the material involved during both the emergency and post-emergency phases.						
PC	DINTS OF REVIEW						
1.	Who performed the initial incident assessment?						
2.	Check the type of information that was obtained during the initial assessment: Type of container, package, etc. involved Extent of damage Estimated quantity of material involved Shipping papers or MSDS's secured Placards, identification numbers, markings, labels						
3.	Information from knowledgeable persons Did the response organization consult various emergency response resources for initial response information?						
	YES NO N/A N/O Time						
4.	List which resources were consulted?						
5.	Check those organizations that were contacted for additional assistance or response information: CHEMTREC/CHEMTEL The shipper The transportation company Facility management Outside expert's computer and/or manual databases Other (List)						



OBJECTIVE 3: INCIDENT ASSESSMENT (continued) 6. Did the response organization report the observed field data to other response.

Э.	Did the response organization report the observed field data to other response units?						
	YES	NO	N/A	N/O	Time		
7.	If yes, to which organizations?						
3.	Was the affected						
	YES	NO	N/A	N/O	Time		
9.	Who performed	d the ongoing	incident asse	essment?			
10.	Did the response organization assess the potential hazards both at the affected sites and to adjacent areas?						
	YES	NO	N/A	N/O			
1.	. Check the following physical factors affecting the release that the response organization assessed: The material state (liquid, gas, solid) Actual and projected release rate Direction of the material released in air or water The physical factors associated with the natural setting						
12.	Check the strategies the response organization used to assess hazards: Established a priority for monitoring airborne toxic substances Developed a strategy for monitoring and using direct reading instruments Maintained monitoring capabilities for the duration of the release Identified and responded to atmospheric and geographic conditions Obtained environmental samples Analyzed the samples Supplemented field monitoring data with assessment data that are based on various computer models						



	Who was responsible for field monitoring activities?			
14.	14. What procedures were implemented by the field monitoring teams?			
15.	15. Did the response organization use the analysis of the field samples to guide of developing protective actions for the responders and for the general public			
	YES NO N/A N/O			



Da	Date:					
Exercise Location:						
Evaluator/Controller Name:						
De	OBJECTIVE 4: RESOURCE MANAGEMENT Demonstrate the ability to mobilize and manage resources required for emergency response.					
P(1.	DINTS OF REV Did the respon incident/accident	ise organiz	ation determir	ne the resourc	es that it required to respond to the	
	YES	NO	N/A	N/O		
	How was this a	ccomplishe	ed?			
2.	-		by developmen	nt of a strategy	for containing the incident/accident?	
	YES	NO				
3.	When did the o	organizatio	n start and finis	h this process	of identifying the required resources?	
4.	Was this proce strategy?	ss complet	ed in time to b	e supportive	of the implementation of a response	
	YES	NO				
5.	Did the organiz	zation cont	act local resou	irce providers	and request necessary resources?	
	YES	NO	N/A	N/O		



		: RESOURCE		NT (continued)	
7.	Were these	calls placed to	a control cell	r to providers?	
8.		-	viders, did the s and points of		use up-to-date and accurate
	YES	NO	N/A	N/O	
9.	What types	of resources v	were requested		
10.	Which local	resource pro	viders were co	tacted?	
11.	Did the orga	nization cont	act external re	source providers and ı	request necessary resources?
	YES	NO	N/A	N/O	
12.	When did th	iis process sta	rt and end?		
13.	Were these	calls placed to	a control cell	r to providers?	



OBJECTIVE 4: RESOURCE MANAGEMENT (continued)

14.	If calls were ma	=		sponse organization use up-to-date and accurate ntacts?
	YES	NO	N/A	N/O
15.	What types of re	esources were	e requested?	
16.	Which external			eted?
17.	Did any of the cincident/accide		al resource p	providers deploy any resources to the site of the
	YES	NO	N/A	N/O
18.	Which provide	rs?		
	What resource	s?		
	Organization/I	ndividuals		
	When did they	arrive?		
19.	Were they the r	esources requ	iested?	
	YES	NO	N/A	N/O
20.	Did any of the coincident/accide		ernal resourc	e providers deploy any resources to the site of the
	YES	NO	N/A	N/O



OBJECTIVE 4: RESOURCE MANAGEMENT (continued) 21. Which providers?_____ What resources? When did they arrive? 22. Were they the resources requested? YES NO N/AN/O 23. Did the IC demonstrate the capability to integrate any deployed external resources into the response effort? YES NO N/AN/O 24. Did the organization demonstrate procedures for securing replacement resources of: ____ Equipment YES NO ____ Personnel YES NO ____ Supplies YES NO 25. If the organization demonstrated procedures for any of the above, did it contact the providers for additional resources? YES NO N/AN/O 26. Did the providers deploy any additional resources? N/A YES NO N/O 27. Which resources were deployed?



OBJECTIVE 4: RESOURCE MANAGEMENT (continued)

28.	Did the organiza	ation demonst	rate a shift ch	ange?	
	YES	NO	N/A	N/O	Time
29.	Was an individu	al/organizatio	on designated	to keep recor	d of resources expended?
	YES	NO	N/A	N/O	
	. Was an individu e response?	al/organizatio	on designated	to record the	expenditure of funds in support of
	YES	NO	N/A	N/O	
31.	Identify the indi	vidual(s)/org	anization(s) r	esponsible for	such record keeping.



Da	ıte:			
Ev	aluator/Contro	oller Name:		
De	BJECTIVE 5: Commonstrate the appense to an in	ability to est	ablish and m	aintain communications essential to support
PO	DINTS OF REVI	EW		
1.	Check those res	ponse units th	ne Incident Co	mmander (IC) established communications with:
	The first	responding ur	nits at the inci	dent/accident site
			=	t the incident/accident location
	-	•		pport is requested by the IC
	•	0 1		ations (including those from other jurisdictions) use organizations
				ice in the identification of the hazardous materials,
				tation of a strategy for containment, cleanup, and
	recovery	7	_	
	Other (L	ist)
2.		=		ere the communications links maintained at a e supporting response units?
	YES	NO	N/A	N/O
3.	Did the IC use the and control responses		l communicat	ion linkages for the performance of his direction
	YES	NO	N/A	N/O
4.	Were the comm	unications link	ks between th	ese locations able to handle all necessary traffic?
	YES	NO	N/A	N/O
5.				aintain effective communications throughout the its under the direction of the EOC staff?
	YES	NO	N/A	N/O



OBJECTIVE 5: COMMUNICATIONS (continued)

6.	Were the comm	unications link	s between the	ese locations able to handle all necessary traffic?
	YES	NO	N/A	N/O
7.	•	O	0	locations removed from the IC and EOC able to communicate with each other)?
	YES	NO	N/A	N/O
8.	Did the response to the organization	O		unications system to provide direction and control
	YES	NO	N/A	N/O
9.	Did the response	e organization	use the comi	nunications system to coordinate their activities

with other organizations?

N/A N/O



Da	ite:				
Ex	ercise Locatio	n:			
Ev	aluator/Contro	oller Name:			
	BJECTIVE 10: Remonstrate the				der health and safety.
	DINTS OF REVI Did the respons movement of pe	se organizatio			one or more zones to regulate the
	YES	NO	N/A	N/O	Time
2.	Did the response	e organizatior	ı establish bar	riers around a	a restricted zone or "hot zone?"
	YES	NO	N/A	N/O	Time
3.	Were the bound	aries of that z	one clearly vi	sible to all res	ponse personnel?
	YES	NO	N/A	N/O	
4.	Did the response	e organization	limit the num	aber of person	nel allowed in the restricted zone?
	YES	NO	N/A	N/O	
5.	Did the response	eorganization	limit the amou	unt of time eac	ch responder remained in that zone?
	YES	NO	N/A	N/O	
6.	Did the response	e organizatior	n provide prot	ective equipm	nent and clothing to responders?
	YES	NO	N/A	N/O	
7.	Was the type of	equipment pr	ovided based	upon the orga	anization's safety and health plan?
	YES	NO	N/A	N/O	



OF	List equipment.	ESPONSE PI	ERSONNEL S	SAFETY (continued)
8.	-	-		s of ongoing incident assessment to determine the ion to be provided to responders?
	YES	NO	N/A	N/O
9.	Did the response without the requ	_		to emergency worker entered the restricted zone and clothing?
	YES	NO	N/A	N/O
10.	Did the response by responders w	-		maintain rules for the use of protective equipment
	YES	NO	N/A	N/O
11.	Did response per	rsonnel operat	e within the re	stricted zone under supervision of a safety officer?
	YES	NO	N/A	N/O
12.	_		_	eyond the initial stages of the incident/accident the criteria required by OSHA 29 CFR 1910.156(e)?
	YES	NO	N/A	N/O
13.	If appropriate edsafe and proper		available to r	esponders, were response personnel trained in its
	YES	NO	N/A	N/O



OBJECTIVE 10: RESPONSE PERSONNEL SAFETY (continued)

14.	Were communic to support safe			•	er, and the site entry team adequate
	YES	NO	N/A	N/O	
15.	Did the safety o	fficer have ac	cess to weath	er data?	
	YES	NO	N/A	N/O	
16.	By what means	(status board	, etc.) was equ	uipment and r	nanpower tracked?
17.		=	=		or potential inhalation hazard wear le engaged in emergency response?
	YES	NO	N/A	N/O	
18.	Did the IC allow	emergency r	esponders to r	emove equip	ment referred to in 12 and 17 above?
	YES	NO	N/A	N/O	Time
19.	Were operation	s in hazardou	s area perforn	ned in the "bu	ddy system?"
	YES	NO	N/A	N/O	
20	Emergen Rescue First aid Emergen	ncy assistance ncy medical tr			rided to emergency workers:



OBJECTIVE 10: RESPONSE PERSONNEL SAFETY (continued)

21.	Check those actions taken upon the departure of emergency response personnel from the
	restricted zone:
	Monitored for contamination
	Decontaminated
	Re-monitored



Da	ate:					
Ex	ercise	Location:				
Ev	aluato	r/Controller Na	ame:			
De se	emonst	_	zational abilit	y and resou	_	to implement site ated and sheltered
PC	OINTS (OF REVIEW				
		e security impler	nented at the inc	cident/accide	nt?	
		7		·		
	YES	NO	N/A	N/O	Time	
2.	Who w	vas responsible fo	r implementing	site security?		
3.	Were o	nly authorized an	nd necessary pers	sonnel allowed	l access to the inci	dent/accident scene?
	YES	NO	N/A	N/O		
4.		the response org	e area with police horized vehicles anization	e tape or road and personnel	lblocks	er access to the site by



OBJECTIVE 11: TRAFFIC AND ACCESS CONTROL (continued)

5. Were traffic controllers actually deployed to designated traffic/access control points?

	YES	NO	N/A	N/O
6.	Was this deployr	nent accompl	ished in a mai	nner to facilitate traffic and access control?
	YES	NO	N/A	N/O
7.	Did the traffic/a	ccess controll	lers minimize	delays?
	YES	NO	N/A	N/O
8.	Were the number direct and control			ol personnel and resources mobilized adequate to w?
	YES	NO	N/A	N/O
9.	Were maps provevacuation rout		law enforcer	nent personnel depicting the affected area and
	YES	NO	N/A	N/O
10.		=		was to shelter-in-place, did the traffic controllers etc. into and from the sheltered area?
	YES	NO	N/A	N/O
11.	Did traffic/acce	ss controllers	limit and prev	vent access to evacuated or hazardous areas?
	YES	NO	N/A	N/O
12.	Did traffic/acce area?	ss controllers	limit access t	to waterways, railways, and airspace in affected
	YES	NO	N/A	N/O



OBJECTIVE 11: TRAFFIC AND ACCESS CONTROL (continued)

YES					
	NO	N/A	N/O	Time	
14. How was	s this information	provided to ti	raffic and acc	ess control staff?	
15. Check tl	hose areas in wh	nich traffic and	d access cont	rol personnel demonstrated ac	
knowled	ge of their roles:			or personner demonstrated de	curate
knowled	ge of their roles: Traffic control	and access cor		or personner demonstrated de	curate
knowled	ge of their roles:	and access cor ites		tor personner demonstrated de	curate
knowled	ge of their roles: Traffic control Evacuation rou Destination rou Location of rec	and access cor ites ites eption centers	ntrol	ties for which traffic and access	



D	ate:				
E	xercise Loc	cation:			
Ev	valuator/C	ontroller Nai	ne:		
Do tr	emonstrate ansporting	e the adequa contaminate	cy of person d and/or inju	nel, proced ured individ	ures, equipment, and vehicles for
P	OINTS OF	REVIEW			
1.	Which org	anization(s) de	emonstrated th	nis objective?	
2.	_		_		
	YES	NO	N/A	N/U	Time
3.	Were the E	EMS personnel	aware of the h	azardous mat	terial involved?
	YES	NO	N/A	N/O	
4.	If yes, desc	ribe how the m	aterial was ide	entified and th	ne material involved.
			establish a protective zone around injured or contaminated individual(s) N/A N/0 Time onnel aware of the hazardous material involved?		



5.	Did EMS po	ersonnel determir	ne the na	cure and extent of	f the injuries?
	YES	NO	N/A	N/O	
6.	Reference Reference Instruction In communication Reference Referen	ituted emergency ase of contact wi er for at least 15 r noved and isolate	response care using th mater minutes ed any co	resource for imming the triage conditional, immediately	flushed the skin or eyes with running
7.	Oth	MS personnel take ter personnel e vehicle e facility/site	YES YES	NO NO	on to:
8.	Use	d gloves as prote	ction aga	inst contamination the a	ambulance with a protective covering
9.	for possible The	njured individual(e contamination? e ambulance crew e ambulance	YES		al facility, were the following monitored
10.	Was decon	tamination of the	EMS per	sonnel or vehicle	e necessary?
	YES	NO	N/A	N/O	
11.	If yes, desc	cribe the decontar	nination	procedures.	



12.	Did the response organization know which ambulance services were designated to provide transportation for contaminated and/or injured persons?							
	YES	NO	N/A	N/O				
13.	Did the ambula	nce crew k	know which med	al facility to transport the	injured individual(s) to?			
	YES	NO	N/A	N/O				
14.	Did the ambula	nce crew	actually drive th	individual(s) to the selec	ted medical facility?			
	YES	NO	N/A	N/O				
15.	Did the ambula	ince crew	maintain comm	nications with:				
	The resp			YES NO				
	_	_	lical facility	YES NO				
16.	Did the ambulacility?	ance crew	communicate	e following information t	o the receiving medical			
	Informati	ng internal	ata on the indivi or external con	nal's physical condition inc amination	cluding their assessment			
	O		dous materials i	olved in the accident				
				S) information relating	to hazardous material			
		l, if availal		,				
	Estimate	ed time of	arrival at the m	ical facility				
17.		_	al staff present	ring the medical examina	ation?			
	Physicia	ın						
	Nurse							
	Toxicolo	_			`			
	Other (LISt			<i>)</i>			



18.	Did the receiving contaminated in	_	acility have w	vritten proced	dures for dealing with potentially
	YES	NO	N/A	N/O	
19.	Did the medical	facility have	MSDS informa	ation available	e onsite?
	YES	NO	N/A	N/O	
20.	Did the medical treated?	facility establ	lish a controll	ed area where	e the injured individual(s) would be
	YES	NO	N/A	N/O	Time
	isolated and self All doors Ventilation facility Floors are Appropri Unnecess Necessare A buffer Medical for necessare	f-contained: leading to the on systems are e covered to reate warning seary equipment, is zone separations acility staff way precautions	e area remain e filtered or in minimize cont igns are in pla nt is either ren including a po ng the control ho have direct to avoid cont	closed amination with ace noved or covertable soil der led area from act contact with	ered asity gauge, if applicable, is in place the rest of the facility is established a contaminated individuals take the contamination
22.	Did the medical	staff monitor	and assess th	e injured indiv	vidual(s) for contamination?
	YES	NO	N/A	N/O	
23.	If yes, describe h	now this was d	lemonstrated.		



24.	If more than one with the proper				ne medical staff treat the patient(s)
	YES	NO	N/A	N/O	
25.	Did a toxicologis	st analyze the	sample from	the injured in	dividual(s)?
	YES	NO	N/A	N/O	Time
26.	Were the results	of the analys	is transmitted	to the attend	ing medical staff?
	YES	NO	N/A	N/O	Time
27.	Did the medical the patient(s)?	staff impleme	nt decontamir	nation procedu	ares for cleansing localized areas on
	YES	NO	N/A	N/O	
28.	Were antidotes	or neutralizing	g chemicals us	sed?	
	YES	NO	N/A	N/O	
29.	Describe the de	contaminatior	procedures.		
30.	Did the medical	staff contain a	and store any	waste solution	ns for disposal?
	YES	NO	N/A	N/O	
31.	Did the medical the patient(s)?	staff maintain	contaminatio	n control mea	sures during and after treatment of
	YES	NO	N/A	N/O	



OBJECTIVE 14: EMERGENCY MEDICAL SERVICES (continued)

YES

NO

N/A

N/O

33. Did the medical staff properly decontaminate any instruments or medical paraphernalia?

YES

NO

N/A

N/O

34. Was the medical staff decontaminated before reentering the medical facility from the controlled area?

YES

NO

N/A

N/O



Da	ate:					
Ex	ercise Loc	cation:				
Ev	aluator/C	ontroller Nai	me:			
De	emonstrate	nonstrate the ability to implement appropriate measures for containment, recovery, cleanup of a released hazardous material. NTS OF REVIEW Was the source of the release controlled? YES NO N/A N/O				
PC	DINTS OF 1	REVIEW				
1.	Was the so	urce of the rele	ease controlled	?		
	YES	NO	N/A	N/O		
Exercise Location: Evaluator/Controller Name: OBJECTIVE 15: CONTAINMENT AND CLEANUP Demonstrate the ability to implement appropriate measures for containment, recover and cleanup of a released hazardous material. POINTS OF REVIEW 1. Was the source of the release controlled?						
3.	Was the re	leased materia	l contained?			
	YES	NO	N/A	N/O	Time	
4.	If yes, descr	ribe how this w	as accomplish	ed.		
5.	Check thos	se resources us	ed to assist in o	containing the	e release:	
Evaluator/Controller Name: OBJECTIVE 15: CONTAINMENT AND CLEANUP Demonstrate the ability to implement appropriate measures for containment and cleanup of a released hazardous material. POINTS OF REVIEW 1. Was the source of the release controlled? YES NO N/A N/O 2. If yes, describe how this was accomplished. Solvent So						
Demonstrate the ability to implement appropria and cleanup of a released hazardous material. POINTS OF REVIEW 1. Was the source of the release controlled? YES NO N/A N/O 2. If yes, describe how this was accomplished. YES NO N/A N/O 4. If yes, describe how this was accomplished. DOT ERG CHEMTREC/CHEMTEL						
	_)
	Oth	er (List)



OBJECTIVE 15: CONTAINMENT AND CLEANUP (continued)

	Did the respons public health an	e organizatio	n assess the i	mpact of the	control/containment strategies on
	YES	NO	N/A	N/O	
7.	Did the respons contractors?	se organizatio	on have avai	lable an up-to	o-date list of cleanup and disposal
	YES	NO	N/A	N/O	
8.	Did the response	e organizatior	n contact and	secure cleanu	p and disposal contractors?
	YES	NO	N/A	N/O	Time
9.	If yes, who made	e the contact?			
10.	What organizat	ion/company	was contacto	ed?	
11.	Did the response	e organization	ı have availab	ole an updated	l list of RCRA disposal facilities?
	YES	NO	N/A	N/O	
12.	Did the response on State require	•			tate agency offices for information
	YES	NO	N/A	N/O	Time
13.	Who made the c	call?			
14.	Which State age	ency was cont	acted?		



OBJECTIVE 15: CONTAINMENT AND CLEANUP (continued)

15. Was assistance requested? YES NO N/A N/O 16. Did the response organization implement controlled policies and strategies on reentry for Emergency response personnel YES NO Evacuated population YES NO Other (List							
	YES	NO	N/A	N/O			
16.		-	-	nt controlled		ategies on reentry fo	r:
			=				
	Oth	er (List)
17.	Did the res	ponse organiza	ation notify the	e following of	the reentry dec	cision?	
	All a	appropriate re	sponse organi	zations	YES NO		
	Tho	se responsible	for congregate	e care of evac	ueesYES NO		
18.	Did the res	ponse organiza	ation inform th	e public of the	e reentry decisi	on?	
	YES	NO	N/A	N/O	Time		
19.	The	safety of wate safety of food	r	_	e public:		
20.	Did the res	ponse organiza	ation initiate tr	raffic and acc	ess control?		
	YES	NO	N/A	N/O	Time		
21.	Did the res	sponse organiz	ation provide	transportation	n assistance if r	necessary?	
	YES	NO	N/A	N/O	Time		
22.	Did the res	ponse organiza	ation impleme	nt policies on	recovery?		
	YES	NO	N/A	N/O	Time		
23.	Did the res	sponse organiza	ation establish	needs for dec	contamination of	efforts?	
	YES	NO	N/A	N/O	Time		



OBJECTIVE 15: CONTAINMENT AND CLEANUP (continued)

24. Did the response organization restore vital services in the affected area?

YES NO N/A N/O Time _____

25. Did the response organization prioritize the use of resources necessary for such restoration?

YES NO N/A N/O Time _____



Da	te:									
Ex	Exercise Location:									
Evaluator/Controller Name: OBJECTIVE 16: INCIDENT DOCUMENTATION AND INVESTIGATION Demonstrate the ability to document a hazardous materials incident/accident and response. POINTS OF REVIEW 1. Was an incident/accident debriefing meeting conducted? YES NO N/A N/O Time 2. Who was responsible for conducting the debriefing? 3. List the response personnel involved in the debriefing. 4. Was a time-line developed at the debriefing? YES NO N/A N/O 5. Was an incident/accident investigation initiated? YES NO N/A N/O										
De	BJECTIVE 16: INCIDENT DOCUMENTATION AND INVESTIGATION emonstrate the ability to document a hazardous materials incident/accident and esponse. DINTS OF REVIEW Was an incident/accident debriefing meeting conducted? YES NO N/A N/O Time Who was responsible for conducting the debriefing? List the response personnel involved in the debriefing.									
PC	PRINCIPLE 16: INCIDENT DOCUMENTATION AND INVESTIGATION Demonstrate the ability to document a hazardous materials incident/accident and response. POINTS OF REVIEW Was an incident/accident debriefing meeting conducted? YES NO N/A N/O Time List the response personnel involved in the debriefing. List the response personnel involved in the debriefing. Was a time-line developed at the debriefing? YES NO N/A N/O Was an incident/accident investigation initiated? YES NO N/A N/O									
			riefing meetin	g conducted?						
	YES	NO	N/A	N/O	Time					
2.	Who was respon	nsible for cond	lucting the del	oriefing?						
3.	List the response	e personnel in	volved in the o	lebriefing.						
4.	Was a time-line of	developed at t	he debriefing?							
	YES	NO	N/A	N/O						
5.	Was an incident	/accident inv	estigation initi	ated?						
	YES	NO	N/A	N/O						
6.	Who was respon	nsible for the i	nvestigation?							



	Was the cause o				NVESTIGATION (continued)			
	YES	NO	N/A	N/O				
8.	Were response j	personnel log	gs and recor	ds used as part	of the investigation?			
	YES	NO	N/A	N/O				
9.	Was incident/ac	ccident infor	mation from	the media secu	ared to aid in the investigation?			
	YES	NO	N/A	N/O				
10.	Was the respons	se to the inci	ident/accide	nt evaluated?				
	YES	NO	N/A	N/O				
11.	If yes, describe h	now the resp	onse was eva	aluated?				
						_		
						_		
						_		
12.	Check recomme	he plan		e:				
	Provide training to responders Conduct additional exercises							
	Provide t	_	_		·)		
13.	Were plans initia	ated to docu	ment the res	ponse to the in	cident/accident in a written report?	,		
	YES	NO	N/A	N/O				





APPENDIX C EXERCISE CHRONOLOGY LOG

	Exercise Chronology Log
Time observed	Describe objective, action, or concern observed



APPENDIX D RADIOLOGICAL DATA

Number	Question	Response
1	Did responder preform preoperational checks on the instrument and start on appropriate scale?	
2	Which type of instrument or probe did responder use (contamination/radiation or pancake/hotdog)?	
3	Were readings for type of instrument/probe being used appropriate (contamination =cpm or radiation = mR/hr)?	
4	Did responder realize that direct contamination readings cannot be taken on the bags /drums because of radiation penetrating through the bags /drums?	
5	Did responder use the smearing method to determine if contamination was present on packages or surrounding area?	
Radiological R	Readings for Responder Approach	
Distance	Radiological Readings cpm (contamination survey instrument)	Radiological Reading mR/hr (radiation survey instrument)
30' - 5'	background - 300 cpm	background
5' - 1'	300 - 1,000 cpm	background - 0.02 mR/hr
Contact with spilled material	1,500 to 25,000 cpm	background to 0.1 mR/hr closed window 0.04 - 0.5 mR/hr open window
Contact with damaged bag	150,000 cpm - off scale	5 - 10 mR/hr closed window 50 - 100 mR/hr open window
Contact with undamaged bag	100,000 cpm - off scale	3 - 10 mR/hr closed window 50 - 100 mR/hr open window
Smear results on undamaged bags	background	background (should not be using radiation survey instrument to check smears)

bags



				<u></u>	NSE	RESPONSE				
					SENCY	EMERGENCY		DAIE: -		
	DATE:					PER:		DATE: -	7	<u> </u>
					55 	- CARRIER:			, 	SHIDDER:
	NO - FURNISHED BY	DRIVER'S SIGNATURE	PLACARDS SUPPLIED	SU PL	Radioactive Class 7		PLACARDS REQUIRED	This is to certify that the above-mentioned materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. per —	/ that the above- are in proper co ransportation.	This is to certify that the abov andlabeled and are in proper of Department of Transportation.
Collect	☐ ☐ Prepaid ☐ C	iner)	(Signature of consig			ð		The agreed of deviation of the property is increasy.	and value of the	agreed of de
(GES	FREIGHT CHARGES	ú			Charges Advanced ↑	Charge	rrier's or shipper's weight" he property.	The shipment moves between two ports by a certifer by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." With the shipment of the property weight. The accordance of the property is benefit. The accordance of the interface of the according is benefit.	overs between two ate is depentdent or	If the shipment m Note: where the r
	Collect □ ◆	delivery of nt of freiaht	The carrier shall not make delivery of this shipment without payment of freight	The carri		€		olale. clp.		9.
	Prepaid L	II sign the	sonsignor, the consignor shall sign the ollowing statement.			P (00.	City:
	C. O. D. FEE:	nditions if this the on the	Subject to section 7 of conditions if this shipment is to be delivered to the considnee without recourse on the	shi	AMT			. to:	Remit C.O.D. to:	Remit
								ISA-III "Exclusive Use Shipment"		
								Solid form as contaminated clothing		L
							ά.	Radionuclide: Mixed Fission Products		
	Radioactive-LSA		sqT 000,8	NA	UN2912	7		Radioactive Material, LSA, n.o.s		ω
Check column	Labels required (or exemption) c	Class or Rate	*Weight (subject to correction)	Packing Group	I.D. Number	Hazard Class	ceptions	Description of articles, special marks, and exceptions	HM D	No. of packages
		azmat	U.S. D.O.T Hazmat Reg. Number		ıl/	Trader Initial/ Number		arrier	Delivering Carrier	Delive
										Route:
	Zip:		83409	Scoville, ID		Origin		Clive, UT 86201 Zip:	ation	Destination
			Way	12 Sagebrush Way		Street		2310 Old Roentgen Road	gnee	Street
	Rowi ronmental	ering &	Idaho National Engineering	o Nations		FROM:	ation only.)	(Mail or street address of consignee for purposes of notification only,)	all or stree	JO.
to said	ver to another carrier on the route to be performed hereunder shall be	otherwise to delivat every service to the transfer of the tran	or its own water line of said property that coepted for himself a	erested in all or any the shipper and ac	y at said destination party at any time in hereby agreed to b	ual place of deliver tion and as to each Par 1035) which are	grees to carry to its us of said route to destina ified in Appendix B to I	sitisticularities and the standard person of carried on all possession of perpoyer under deriver and on the control stages to calcular the control and person of the control of the contro	n it is mutually a all the condition	this contra destinatio subject to
nout	ກກpany" being understood through	any (the word "co	ow, which said comp	from ed as indicated belo	onsigned, and destin	known), marked, co	date ontents of packages un	below is in apparent good order, except as noted (contents and condition of co	rty described be	at The prope
_								Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading	subject to th	Received
		OU8-12	Carrier's No. o	_ Carrie		ဂ	SCAC.		¥ 	(Carrier
		6-023E23	.0	Negoti: Shipp	al - Not	- Origin	FORM	STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable	AIGH-	STR

tools

LSA Exercise

162

RADIOACTIVE MATERIALS (Low to Moderate Level Radiation)

ERG2000

(Low to Moderate Level Radiation)

162

RADIOACTIVE MATERIALS

POTENTIAL HAZARDS

EMERGENCY RESPONSE

Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.

- Move containers from fire area if you can do it without risk
- Do not move damaged packages; move undamaged packages out of fire zone

Small Fires

Dry chemical, CO₂, water spray or regular foam.

bulk container, hazard will vary from low to moderate. Level of hazard will depend on the type and

Low radiation hazard when material is inside container. If material is released from package or

radiation exposure, or both external and internal radiation exposure if contents are released Undamaged packages are safe. Contents of damaged packages may cause higher external

Radiation presents minimal risk to transport workers, emergency response personnel, and

HEALTH

the public during transportation accidents. Packaging durability increases as potential

hazard of radioactive content increases.

Released radioactive materials or contaminated objects usually will be visible if packaging fails.

Some exclusive use shipments of bulk and packaged materials will not have "RADIOACTIVE"

labels. · Placards, markings, and shipping papers provide identification

Some material may be released from packages during accidents of moderate severity but

risks to people are not great.

amount of radioactivity, the kind of material it is in, and/or the surfaces it is on

Some packages may have a "RADIOACTIVE" label and a second hazard label. The second

hazard is usually greater than the radiation hazard; so follow this Guide as well as the

Some radioactive materials cannot be detected by commonly available instruments

response Guide for the second hazard class label

Runoff from control of cargo fire may cause low-level pollution

- Water spray, fog (flooding amounts)
- Dike fire-control water for later disposal

Large Fires

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Cover liquid spill with sand, earth or other noncombustible absorbent material.
- Dike to collect large liquid spills
- Cover powder spill with plastic sheet or tarp to minimize spreading

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.

Uranium and Thorium metal cuttings may ignite spontaneously if exposed to air (see Guide

Some of these materials may burn, but most do not ignite readily

FIRE OR EXPLOSION

Nitrates are oxidizers and may ignite other combustibles (see Guide 141).

Paper not available or no answer, refer to appropriate telephone number listed on the

inside back cover.

Priorities for rescue, life-saving, first aid, and control of fire and other hazards are

higher than the priority for measuring radiation levels.

CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping

PUBLIC SAFETY

Radiation Authority must be notified of accident conditions. Radiation Authority is usually

responsible for decisions about radiological consequences and closure of emergencies.

Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all

directions. • Stay upwind. • Keep unauthorized personnel away.

Detain or isolate uninjured persons or equipment suspected to be contaminated; delay

decontamination and cleanup until instructions are received from Radiation Authority

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters'

protective clothing will provide adequate protection

EVACUATION Large Spill

PROTECTIVE CLOTHING

- Apply artificial respiration if victim is not breathing
- Administer oxygen if breathing is difficult
- In case of contact with substance, wipe from skin immediately; flush skin or eyes with running water for at least 20 minutes.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination

When a large quantity of this material is involved in a major fire, consider an initial

evacuation distance of 300 meters (1000 feet) in all directions

Consider initial downwind evacuation for at least 100 meters (330 feet)



STYLE L80

Printed by Labelmaster, Div. of American Labelmark Co.

Chicago, IL 60646